A NORMATIVE STUDY OF PHYSICAL FITNESS FOR BOYS AND GIRLS IN SECONDARY SCHOOL

A Proposal submitted to SRTM University Nanded in partial fulfillment of the requirement for the admission to the degree of

Doctor of Philosophy in Physical Education

By

T.VIJAYAVEL

Under the guidance of

Dr.LAD BALIRAM DNYANOBARAO

College of Physical Education

Nanded, Maharashtra

Chapter-I Introduction

Physical fitness is being accepted as one of the vital objectives of physical education. The adaptive capacity of the individual to the rigorous of work is determined by his physical fitness. A national plan of physical education and recreation was prepared by the advisory board of physical education and recreation in 1956 which had suggested some norms for physical efficiency test. The advisory board recommended that the Kraus-Weber Test and the Canadian Fitness test be similarly validated and suitable norms prepared for used in India.

A National Physical Efficiency drive presently known as Physical Fitness Program was launched in our country in 1959-60 by Union Ministry of Education with the purpose to create consciousness and enthusiasm amongst the people of our country for Physical Fitness and to stimulate their interest for physical welfare which will help them to a better and more healthful living

Problem

In the beginning strength test were very popular. Emphasis began to be placed not only on cardiovascular test but also on testing the fundamental skills such as running, jumping and throwing. These test were used not only for grading purpose but also for classification were students might be permitted either to choose their activity or participate in some type of sports programme instead of class work.

The AAHPER Youth Fitness Test Project represented the first attempt by the physical education profession to establish the national norms. The test battery was originally developed in 1957 by a special committee of the AAHPER council. The AAHPER test now consists of six items for both boys and girls of age group 10 to 17 and college men and women. There is no prescribed norms for evaluating the students in physical fitness in SCISM Group of Schools. Realizing the importance of evaluating the students in physical fitness there is a need for preparing the norms.

The investigator therefore decided to study and prepare the norms of the physical fitness for the boys and girls in SCISM Group of Schools. The problem for research is therefore stated as fallows.

A NORMATIVE STUDY OF PHYSICAL FITNESS FOR BOYS AND GIRLS IN SECONDARY SCHOOL

Significance of the problem

If the test in physical fitness is accompanied by norms its usefulness enhanced. The marks awarded to the students for achievement in fitness under the scheme of evaluation of physical education will be more realistic and justifiable if the norms are scientifically computed specifically for the students population under consideration. Thus norms will serve the purpose of parameter with respect to the ability of the students in fitness and also motivate them to raise their percentage level in comparison with their fellow students.

Objectives of the study

1. To prepare physical fitness norms for Boys and girls for the particular region i.e Bodinayakanur, Rasingapuram. Since this region is poor.
2. The main objective of the study was to find out the status of physical fitness among school going boys and girls of SCISM Group of Schools Bodinayakanur.
3. To compare the physical fitness status between 11 & 12 with 13 & 14 ages of boys and girls (6^{th} to 9^{th} Standard) of SCISM Group of Schools Bodinayakanur.
4. To compute the norms of the AAHPER Youth Fitness Test for boys and girls of SCISM Group of Schools Bodinayakanur.
5. To classify the students according to their ability.
6. The purpose of the study was to find out physical fitness and talent identification among the school boys and girls of SCISM Group of Schools Bodinayakanur for teaching and coaching.
7. This study will bring awareness about physical fitness among school boys and girls of SCISM Group of Schools Bodinayakanur.

Limitations

The research work limited to the following points.

1. The study was conducted on sample drawn from different populations. So the motivation level of the subjects at the time of testing was not controlled.
2. Certain factors like habits, life style, daily routine work, diet, etc, might have influenced the results which were not considered in this study.
3. The conditions of the school ground and environmental factors have not been taken into consideration.
4. The subjects for the study do not come from the same social, economical and cultural background.

Delimitations

The research work delimited to the following points.

1. The research work will be limited to the students who are studying from 6^{th} to 9^{th} Standard
2. It is proposed to study and compute the norms of physical fitness for 1000 boys and 500 girls of SCISM Group of Schools Bodinayakanur.
3. The AAHPER Youth Fitness Test items will be conducted.

Hypothesis

It was hypothesized that physical fitness level of school boys and girls of 11 & 12 with 13 & 14 ages performance would not be the same.

Definition of Norms

A norm is a scale which permits conversion from a raw score to a score capable of comparison and interpretation.

Physical Fitness

Physical fitness has been defined as the ability to carry out daily task with vigour and alertness without undue fatigue and with ample of energy to leisure time pursuits and to meet unusual situation and unforeseen emergencies.

Chapter-II Review of related literature

1. **Ajmer Singh (1986)** conducted a study in the field of Physical Education and construct physical fitness norms for four thousand male students belonging to pre university classes of Punjab University, Chandigarh. Fleishman's Physical Fitness Test Battery was administered on them. The three scales namely Percentile scale, Hull scale and T-scale were prepared. It was also concluded that physical fitness improved linearly with age and the students belonging to rural areas were significantly superior in their performance when compared to the students of urban areas.
2. **Pillai Atchia (1991)** conducted a study on computation of norms for 12 minute run and walk among school boys. In his study he described cardiovascular endurance is one of the basic and important component of physical fitness, a state level norm will be useful for boys to understand their present status compared with other boys of the same age, for the teacher and coach either to understand or to prescribe a programme to improve the student ability and to compare it with other states. Since 15, 000 subjects were involved in the study, 12 minute run / walk test has been considered as the more appropriate test for assessing cardiovascular endurance. For this study data were collected from 20 districts. Data collected from 250 subjects in each age category of 13, 14 and 15 years school boys. Test were conducted on 12 minute run/walk and the distance covered 50th meter were recorded as their performance. Two-way analysis of variance was applied to find out whether there was any significant difference between the district and age group in 12 minutes run/walk performance. It was found that significant difference was not noticed only among different age groups. Hence norms were constructed throughout the state for different age groups by using Hull scale
3. **Tyagi Sarita (1994)** constructed physical fitness norms for boys and girls in grade nine to twelve in Delhi state. The sample comprised 6000 subjects of 50 schools in each age group of 14th, 15th and 16th years with equal numbers of boys and girls. The AAHPER Youth Fitness Test 1) pull ups in case of boys and flexed arm hand in case of girls 2) bent knee sit- ups 3) 4x10 meter shuttle run 4) standing broad jump 5) 50 meter dash and 6) 600 meter run/walk separately for boys and girls. There was no significant difference in physical fitness across the age in both boys and girls. In case of boys height was significantly and negatively relates to physical fitness while weight was significantly and positively correlates with physical fitness
4. **Sharma Kamal Kant (1997)** conducted a study to construct and standardized motor fitness battery for elementary school children of Delhi (U.T), with samples of 500 boys and girls. Study was conducted in two phases. In the first phase, motor fitness battery developed by using factor analysis technique. The battery consisted of five

motor fitness test items namely 1) softball throw 2) toe touching 3) double foot balance 4) 50 meter dash 5) 300 meter run/walk for girls and boys. In the second phase percentile scale developed on all the five components of motor fitness.

5. **Kumar D (1998)** constructed normative study of physical fitness by using Fleishman's battery. A sample of 3840 male subjects randomly selected from urban and rural schools of Himachal Pradesh State. Results of the study indicated that there was a significant linearity from 13 to 16 year male subjects in all the fitness components and 16 years old boys were found significantly superior than 13 to 15 year boys. The 15 years boys were better than 13 to 14 year boys. Similarly 14 year boys were superior to 13 year boys in all the components.

Chapter-III Methodology

In this chapter, the selection of subjects, selection of variables, selection of tests, reliability of the instruments, reliability of the data, competence of tester, orientation to the subjects, pilot study, collection of the data, tests administration and statistical procedure will be explained.

Selection of Tests

Standardized tests are often used in educational research projects to measure factors such as school achievement, self concept and attitudes. Most of the tests used in educational research are norm referenced. In the field of physical education also, norm referenced research is more appropriate and useful. Thus the AAHPER Youth fitness test was selected for the purpose of the study. This test measures most of the physical fitness components satisfactorily. Moreover the items were not complicated but were simple and easy to be operated upon the subjects. The test items and components in AAHPER Youth Fitness Test are as follows in table – 1.Test will be conducted as per AAHPER Fitness Test manual.

Table – 1
AAHPER YOUTH FITNESS TEST AND COMPONENTS

Sr. No	Variables	Test Items	Components
1	Strength	Pull – Ups For Boys Flexed Arm Hang- For girls	Arm/Shoulder Muscular Strength and Endurance
2	Endurance	Bent Knee Sit – Ups For Boys and Girls	Abdominal/Hip Muscular Strength &Endurance
3	Agility	Shuttle Run For Boys and Girls	Speed and Change of Direction
4	Power	Standing Broad Jump For Boys and Girls	Explosive Power of Leg Extensor Muscles
5	Speed	50 Meter Dash For Boys and Girls	The Ability to move from one place to another in the shortest possible time
6	Cardio Respiratory Endurance	600Meter run/walk For Boys and Girls	Circulatory Respiratory Endurance

Chapter-IV Analysis and Interpretation of Data

The performance of each test items were gathered for boys and girls separately. The age group 11 & 12 years combined together (i.e 6^{th} & 7^{th} Standard) and age group 13 & 14 years combined together (i.e 8^{th} & 9^{th} Standard) for preparing the norms.

To prepare the norms percentile scale will be use.

To find out the reliability of the test the coefficient of correlation (Pearson product) will be used (Test and Re-Test method).

The level of significance was set at 0.05 confidences.

Chapter-V Conclusion

It will be discussed the result and draw conclusion based on analysis and interpretation.

Brief information about the chapters

Chapter-I Introduction

The chapter will be introductory in nature and present general background of the problem by discussing the objective of the research, importance and need.

Chapter-II Review of related literature

This chapter will deal with the review of research work in the field and point out the need of the present work on the back ground of the field of research covered so far.

Chapter-III Methodology

This chapter will be devoted to the research procedure adopted. It will present the different tools adapted for testing the AAHPER Fitness Test for the students in collecting the data.

Chapter-IV Analysis and Interpretation of Data

This chapter will deal with the analysis of the data collected and statistical technique employed for preparing the norms for the students in AAHPER Fitness Test.

Chapter-V Summary, Conclusion and Recommendation

This chapter discuss the results and draw conclusions based on the analysis and interpretation.

Bibliography

Reference Books

1. Barrow,Harold M and MaGee Rosemary.A Practical approach to measurement in physical education. Philadelphia: Lee and Febiger, 1971
2. Clarke H. Harrison Application of measurement health and physical education.
3. Clarke and Clarke. Research process in physical education.
4. Ajmer Singh (1986) Normative Study of Physical Fitness of Punjab University on Men Students (Published Doctoral Thesis, Punjab University, Chandigarh)
5. Kumar D (1998) A Normative Study of Physical Fitness of Himachal Pradesh Higher Secondary School Boys (Published Doctoral Thesis, Punjab University, Chandigarh)

6. Pillai Atchia (1991) Computation of Norms for 12 minute run and walk Among School Boys (Published Doctoral Thesis, Alagappa University, Karaikudi)
7. Sharma Kamal Kant (1997) Construction and Standardization of Motor Fitness Test Battery for Elementary School Children in Delhi (Published Doctoral Thesis, Punjab University, Chandigarh)
8. Tyagi Sarita (1994) Physical Fitness Norms for Boys and Girls in Grades Nine Through Twelve of Delhi State (Published Doctoral Thesis, Jiwaji University, Gwalior)

Guide

(Dr.Lad Baliram Dnyanovarao)

(Vijayavel T)
Ph.D Scholar